

AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A process for converting a hydrocarbon feedstock to provide an effluent containing light olefins, the process comprising passing a hydrocarbon feedstock, ~~the feedstock~~ containing at least one C₁ to C₆ aliphatic hetero compound selected from the group consisting of alcohols, ethers, carbonyl compounds and mixtures thereof and containing steam in an amount ~~whereby the feedstock contains~~ up to 80 weight % ~~steam of said feedstock~~, through a reactor containing a crystalline silicate catalyst to produce an effluent including propylene which is recovered from the reactor, wherein, the crystalline silicate ~~having been subjected to de-alumination by a steaming step and being~~ catalyst is pretreated by subjecting said catalyst to steaming to de-aluminate said catalyst and is selected from at least one of an MFI-type crystalline silicate having a silicon/aluminium atomic ratio within the range of ~~from~~ 250 to 500 and an MEL-type crystalline silicate having a silicon/aluminium atomic ratio within the range of ~~from~~ 150 to 800.

2. **(Original)** A process according to claim 1 wherein the MFI -type crystalline silicate catalyst comprises silicalite.

3. **(Currently Amended)** A process according to claim 1 ~~or claim 2~~ wherein the hydrocarbon feedstock contains at least one hetero compound selected from the group consisting of methanol, ethanol, dimethyl ether, diethyl ether and mixtures thereof.

4. **(Currently Amended)** A process according to ~~any foregoing~~ claim 1 wherein the hydrocarbon feedstock is passed over the crystalline silicate at a reactor inlet temperature of from 350 to 650 °C.

5. **(Original)** A process according to claim 4 wherein the hydrocarbon feedstock is passed over the crystalline silicate at a reactor inlet temperature of from 450 to 550 °C.

6. **(Currently Amended)** A process according to ~~any foregoing~~ claim 1 wherein the hydrocarbon feedstock is passed over the crystalline silicate at a WHSV of from 0.5 to 30 h⁻¹, the WHSV being based on the weight of the at least one C₁ to C₆ aliphatic hetero compound in the feedstock.

7. **(Currently Amended)** A process according to ~~any foregoing~~ claim 6 wherein the partial pressure of the at least one C₁ to C₆ aliphatic hetero compound in the feedstock when passed over the crystalline silicate is from 20 to 400 kPa.

8. **(Cancelled)**

9. **(Cancelled)**

10. **(Cancelled)**

11. **(New)** A process according to claim 1 wherein the crystalline silicate catalyst is pretreated by subjecting said catalyst to steaming, followed by extracting aluminum from the catalyst by contacting said catalyst with a complexing agent for aluminum to remove aluminum resulting from steaming from the pores of the catalyst framework.

12. **(New)** A process according to claim 1 wherein said catalyst comprises an MFI-type crystalline silicate having a silicon/aluminum atomic ratio within the range of 250 to 500.

13. **(New)** The process according to claim 1 wherein said catalyst comprises an MEL crystalline silicate having a silicon/aluminum atomic ratio within the range of 150-100.

14. (New) A process according to claim 1 wherein pretreatment of said catalyst by steaming reduces tetrahedral aluminum in the crystalline silicate framework of the catalyst and converts the tetrahedral aluminum to octahedral aluminum in the form of amorphous alumina, causing partial obstruction of the pores of the crystalline silicate framework and said catalyst is treated with a complexing agent for aluminum to remove amorphous alumina from the pores of the crystalline silicate framework.

15. **(New)** A process for converting a hydrocarbon feedstock to provide an effluent containing light olefins comprising:

(a) treating an MFI-type crystalline silicate with steam to de-aluminate said catalyst and increase the silicon/aluminum atomic ratio thereof to a value within the range of 250-500;

(b) providing a reactor containing said de-aluminated MFI-type crystalline silicate;

(c) supplying a hydrocarbon feedstock containing at least one C₁ – C₆ aliphatic hetero compound selected from the group consisting of alcohols, ethers, carbonyl compounds and mixtures thereof to said reactor containing said MFI-type crystalline silicate catalyst;

(d) providing steam to said reactor in an amount of up to 80 weight % of said feedstock to said reactor;

(e) operating said reactor under conversion conditions to convert at least a portion of said feedstock to propylene; and

(f) recovering a conversion product containing propylene from said reactor.

16. **(New)** A process according to claim 15 wherein the hydrocarbon feedstock contains at least one hetero compound selected from the group consisting of methanol, ethanol, dimethyl ether, diethyl ether and mixtures thereof.

17. **(New)** The process of claim 15 wherein said feedstock comprises methanol and said reactor is operated under conversion conditions comprising an inlet temperature within the range of 450-550° C.

18. **(New)** The process of claim 17 wherein said reactor is operated under conversion conditions providing a product containing propylene and ethylene and having a propylene/ethylene ratio which is greater than the propylene/ethylene ratio of a conversion product produced by the conversion of a methanol-containing feedstock operated at an inlet temperature in said reactor of 400° C.

19. **(New)** The process of claim 17 wherein said reactor is operated under conversion conditions providing a product containing propylene and propane and having a propylene/propane ratio which is greater than the propylene/propane ratio of a conversion product produced by the conversion of a methanol-containing feedstock operated at an inlet temperature of 400° C.

20. **(New)** A process according to claim 15 wherein pretreatment of said catalyst by steaming reduces tetrahedral aluminum in the crystalline silicate framework of the catalyst and converts the tetrahedral aluminum to octahedral aluminum in the form of amorphous alumina, causing partial obstruction of the pores of the crystalline silicate framework and said catalyst is treated with a complexing agent for aluminum to remove amorphous alumina from the pores of the crystalline silicate framework.

21. **(New)** A process according to claim 15 wherein the hydrocarbon feedstock is passed over the crystalline silicate at a reactor inlet temperature of from 450 to 550 °C.

22. **(New)** A process according to claim 15 wherein the hydrocarbon feedstock is passed over the crystalline silicate at a WHSV of from 0.5 to 30 h⁻¹, the WHSV being based on the weight of the at least one C₁ to C₆ aliphatic hetero compound in the feedstock.